

Miniature Active Space Radiation Dosimeter, Phase II

Completed Technology Project (2006 - 2008)



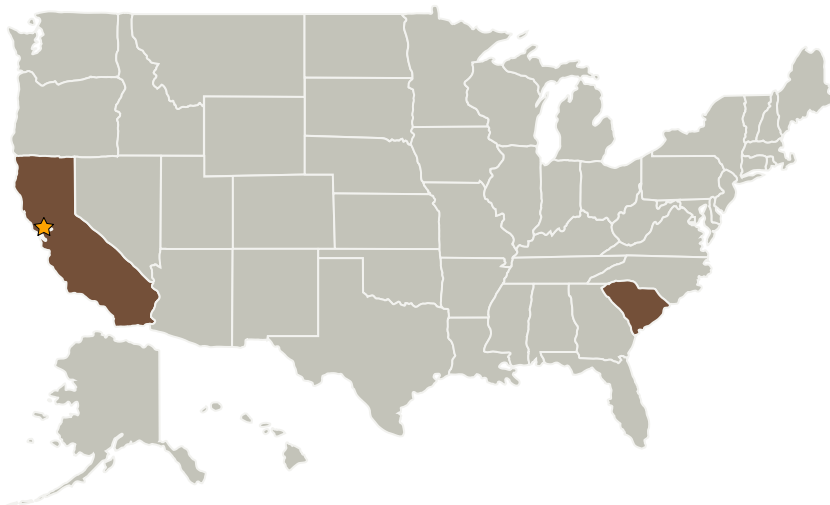
Project Introduction

Space Micro will extend our Phase I R&D to develop a family of miniature, active space radiation dosimeters/particle counters, with a focus on biological/manned dose levels. A single board design will support both manned level and space electronics level dosimetry needs. This is enabled by the density and features of commercial high density silicon semiconductor memory devices, coupled with innovative patented programming algorithms. We plan to augment this core dosimeter technology with other emerging novel miniature radiation detectors to enhance single particle detection, including heavy ions and secondary neutrons. A flight dosimeter will be delivered to NASA for flight demo on ISS or other platform. Space Micro will then commercialize for both NASA markets (manned and electronics grade levels) with a standard product offering through our established marketing channels.

Anticipated Benefits

Potential NASA Commercial Applications: Non-NASA applications include detectors and dosimeters for the Department of Homeland Security (DHS). US and NATO ground military forces also could benefit. Planned commercial space tourism ventures will need stringent passenger monitoring. Commercial and DoD space programs such as imaging, weather and telecommunications satellites will be benefit and be future customers for this standard product.

Primary U.S. Work Locations and Key Partners



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Table of Contents

Project Introduction	1
Anticipated Benefits	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Transitions	2
Project Management	2
Technology Areas	2

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Space Micro, Inc.	Supporting Organization	Industry	San Diego, California

Primary U.S. Work Locations

California	South Carolina
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Project Transitions

**June 2006:** Project Start**June 2008:** Closed out**Closeout Summary:** Miniature Active Space Radiation Dosimeter, Phase II Project Image

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Dave J Strobel

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
 - └ TX06.5 Radiation
 - └ TX06.5.5 Monitoring Technology